CLAIMS

1. Reactor for carrying out non-adiabatic catalytic reactions consisting of a metallic ingot and comprising at least one reaction passage extending through the ingot and being adapted to hold a catalyst for non-adiabatic conversion of a feedstock;

inlet passages for introduction of the feedstock into the reaction passage and outlet passages for withdrawing reacted feedstock, the inlet and outlet passages being provided within the ingot; and

heating or cooling means for maintaining the catalytic reactions within the reaction passage.

2. The reactor of claim 1, wherein a number of the reaction passages is arranged in parallel rows within the ingot.

3. The reactor of claim 1, wherein the inlet and outlet passages are provided within the ingot substantially perpendicular to the reaction passages and connect the reaction passages in parallel manner.

4. The reactor of claim 1, wherein the heating or cooling means are arranged within and/or at surface of the ingot.

5. The reactor of claim 1, wherein the heating or cooling means is provided in a substantially perpendicular direction with the reaction passages.

6. The reactor of claim 1, wherein the heating means is in form of electrical heater.

7. A reactor containing a number of the metallic ingots according to claim 1.

8. The reactor of claim 7, wherein the number of the metallic ingots is arranged within a common shell.

9. The reactor of claim 8, wherein the common shell is heat insulated.

10. The reactor according to any one of the preceding claims, wherein the reaction passages and the outlet and inlet passages are in form of drilled channels.